action of this preparation. In the curentl study only a 5 fold upregulation of Il-1Ra was seen in the equine serum after processing. Further work defining the "soup" created after processing should be undertaken given the positive clinical results.

521 EFFECTS OF PHYSIOTHERAPY AND REHABILITATION PROGRAM ON MUSCLE STRENGTH, QUALITY OF LIFE, PAIN, STIFFNESS, AND PHYSICAL FUNCTION IN WOMEN WITH KNEE OSTEOARTHRITIS

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Purpose: Muscle weakness, atrophy, pain, walking disturbances, and reduced joint range of motion are the primary findings of knee osteoarthritis that can effect quality of life and functional capacity. The treatment focuses on minimizing impairment and improve quality of life. The purpose of this study was to evaluate the effects of a physiotherapy and rehabilitation program on muscle strength, quality of life, pain perception, and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) including knee pain, stiffness, and physical function dimensions.
Methods: Forty women with knee osteoarthritis participated in this study. Patients were randomly and equally divided into two groups. The first group underwent hotpack, ultrasound, and exercise using proprioceptive neuromuscular facilitation techniques (PNF) for 10 sessions, 5 days per week for 2 weeks. Afterwards, patients continued PNF exercises for 4 weeks, 3 days per week. The second group underwent hotpack, ultrasound and isokinetic exercises for 10 sessions, 5 days per week, for 2 weeks. Then, patients performed isokinetic exercises 3 days per week for 4 weeks. Both groups were evaluated before and at the end of 6-week treatment using isokinetic dinamometer for muscle strength, visual analogue scale for pain perception, SF-36 for quality of life, and WOMAC for comprehensive knee osteoarthritis evaluation (knee pain, stiffness, and physical function).
Results: Muscle strength, quality of life, pain perception, knee pain, stiffness, and physical function improved in both groups after the treatment ($p < 0.05$). There was no significant difference between the two groups in any of the parameters ($p > 0.05$).
Conclusions: Physiotherapy and rehabilitation program consisting of hotpack, ultrasound and exercise performed either using PNF technigues or expensive isokinetic dinamometer improves muscle strength, quality of life, pain perception, and WOMAC (knee pain, stiffness and physical function) score in women with knee osteoarthritis. Both programs could be used to improve quality of life and function.

522 CLINICAL PRACTICE GUIDELINES FOR REHABILITATION IN KNEE OSTEOARTHRITIS BY SFR (FRENCH SOCIETY OF RHEUMATOLOGY) AND SOFMER (FRENCH PHYSICAL MEDICINE AND REHABILITATION SOCIETY)

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Purpose: OARSI and EULAR recommendations for knee osteoarthritis (OA) recommend nonpharmacological treatment, particularly physical exercise. The possible modalities of exercise treatments are numerous and depend on the rhythm, duration and type or technique and whether they are conducted individually or in groups, but recommendations for the type of exercise are lacking.
The aim of this work was to develop clinical practice guidelines for prescribing exercise therapy in knee OA.
Methods: The SOFMER 3-stage method for developing guidelines involves systematic literature review, collection of information about professional practice and final scientific committee review, including patient opinion. The topic was the value of individual or group exercise programs, exercise supervision or not by a physical therapist, and the impact of compliance with exercise.
Results: The benefit of individual exercise is low to moderate for pain, strength and ability to walk. The effectiveness is not maintained over time if the exercise program is not continued. The benefit of collective exercise is low to moderate for pain, strength, balance and ability to walk. There is no evidence of the superiority of one modality over the other (individual or collective). A program of initial physical exercise supervised by a physiotherapist, then an unsupervised program at home with compliance monitoring is recommended. The type, intensity, and frequency of the exercises must be adapted to each patient. The OA location and gravity, functional need, and characteristics of patients are useful for future studies. For better efficiency, an exercise programme for OA must be associated with the means to improve compliance. These means may concern the choice of the population: people having performed physical activities previously, having a positive opinion of the programme and having a human and material environment favourable to its fulfilment. Whatever the exercises proposed, they must be adapted to the physical capacity and the condition of the patient in terms of pain (professional consensus). A preliminary explanation of the expected results, auto-evaluation by use of a diary, and long-term support (by phone call or mail) by a health care professional favour compliance with exercise.
Conclusions: Exercise therapy is effective for knee OA, although complementary randomized controlled studies are necessary to characterize the best exercises and their intensity and frequency for management of knee OA.

523 COMPARISON OF STRENGTH, FUNCTIONAL OUTCOME AND PROPRIOCEPTIVE ABILITY AFTER PILATES-BASED EXERCISE PROGRAM IN WOMEN PATIENTS WITH KNEE OSTEOARTHRITIS AND HEALTHY WOMEN

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Purpose: The Pilates method is an integrative and comprehensive approach for a complete body workout, yet can also be individualized to meet specific rehabilitative needs. The aim of this study was to measure the level of pilates-based exercise of patients with OA, to compare the proprioceptive ability, timed up and go, and isokinetic strength measurements this with that of matched healthy controls.
Methods: Sixty subjects with bilateral knee OA (mean age: 52.31 ± 8.73 years) and 99 age-matched controls (50.79 ± 7.77 years) were participated in this study. Both groups were recruited for 12-week pilates-based exercise program. Proprioceptive test measurements with Functional Squat System (Monitored Rehab Systems), timed performance test (timed up&go) (TUG), peak torque (PT) measurements of the knee extensors and flexors at 180º/sec on an isokinetic dynomometer (ISOMED 2000) and body composition analyse (TANITA) were used to quantify the variables.
Results: Participants in both groups demonstrated significant gains in all tests ($p < 0.05$). No significant differences were found in TUG test ($t = -1.42$, $p = 0.15$), left knee extensor PT ($t = 0.81$, $r = 0.41$), right knee extensor PT ($t = 0.75$, $p = 0.45$), left knee flexor PT ($t = 1.8$, $p = 0.07$) and right knee flexor PT ($t = -3.08$, $p = 0.002$) results between gains of the groups. Healthy subjects demonstrated greater body weight reduction ($t=5.8$, $p = 0.0$), body mass index ($t = 2.5$, $p = 0.01$), body fat percent ($t = 5.6$, $p = 0.0$) and right knee flexor isokinetic strength gain ($t = -3.08$, $p = 0.002$) at the end of 12 weeks when compared to the OA group.
Conclusions: There was a resistance to reduce body weight and body fat percent in OA group. Pilates training for both groups may result in improved strength, functional measures and proprioceptive ability. Pilates exercises may be an effective, enjoyable and safe exercise option for women who are recovering from OA treatments; however, further research is needed.